Project Management Toolbox
at Los Alamos National Laboratory

Project 1

Presented by
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Safeguards Systems Group

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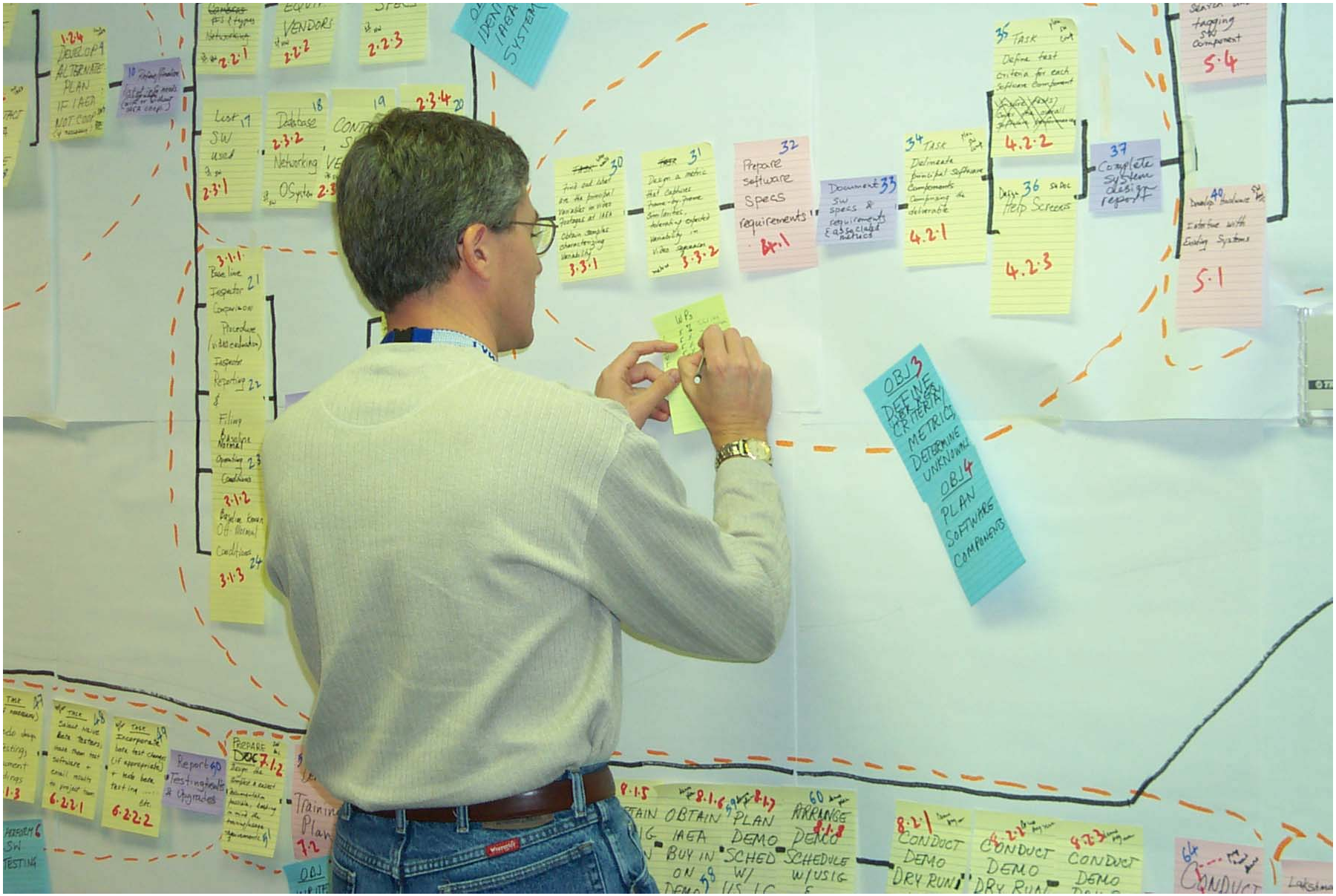
The scope includes only
design, development, testing,
& demonstration of the software
prototype.
Scope does not include
(site testing (to be done by IAEA)
ALEXEI
PHIL


DEVELOP ALTERNATE PLAN IF IAEA NOT COOP
VENDORS
IDENT IAEA SYSTEM
Test SW used
Database
Networking
OSyste
Prepare software Specs requirements
Document SW specs & requirements Easy/clear metrics
TASK
Define test criteria for each software component
Complete system design report
Help Screens
Baseline Inspector Comparison
Procedure (data evaluation)
Inspector Reporting
Filing
Archive
Normal
Operating
Conditions
Baseline Known
Off-Normal
Conditions
OBJ 3
DEFINE OBTAIN CRITERIA METRICS
DETERMINE UNKNOWNS
OBJ 4
PLAN SOFTWARE COMPONENTS
OBTAIN IAEA BUY IN
PLAN DEMO SCHED W/ USIG
ARRANGE DEMO SCHEDULE W/USIG
CONDUCT DEMO DRY RUN
CONDUCT DEMO DRY RUN
CONDUCT
Report Testing results & changes
Training Plan
DOJ

SCOPE

The scope includes only design, development, testing, & demonstration of the software prototype.

Scope does not include field testing (to be done by IAEA) or ~~device~~ manufacturing (to be done by a commercial entity)

Objectives

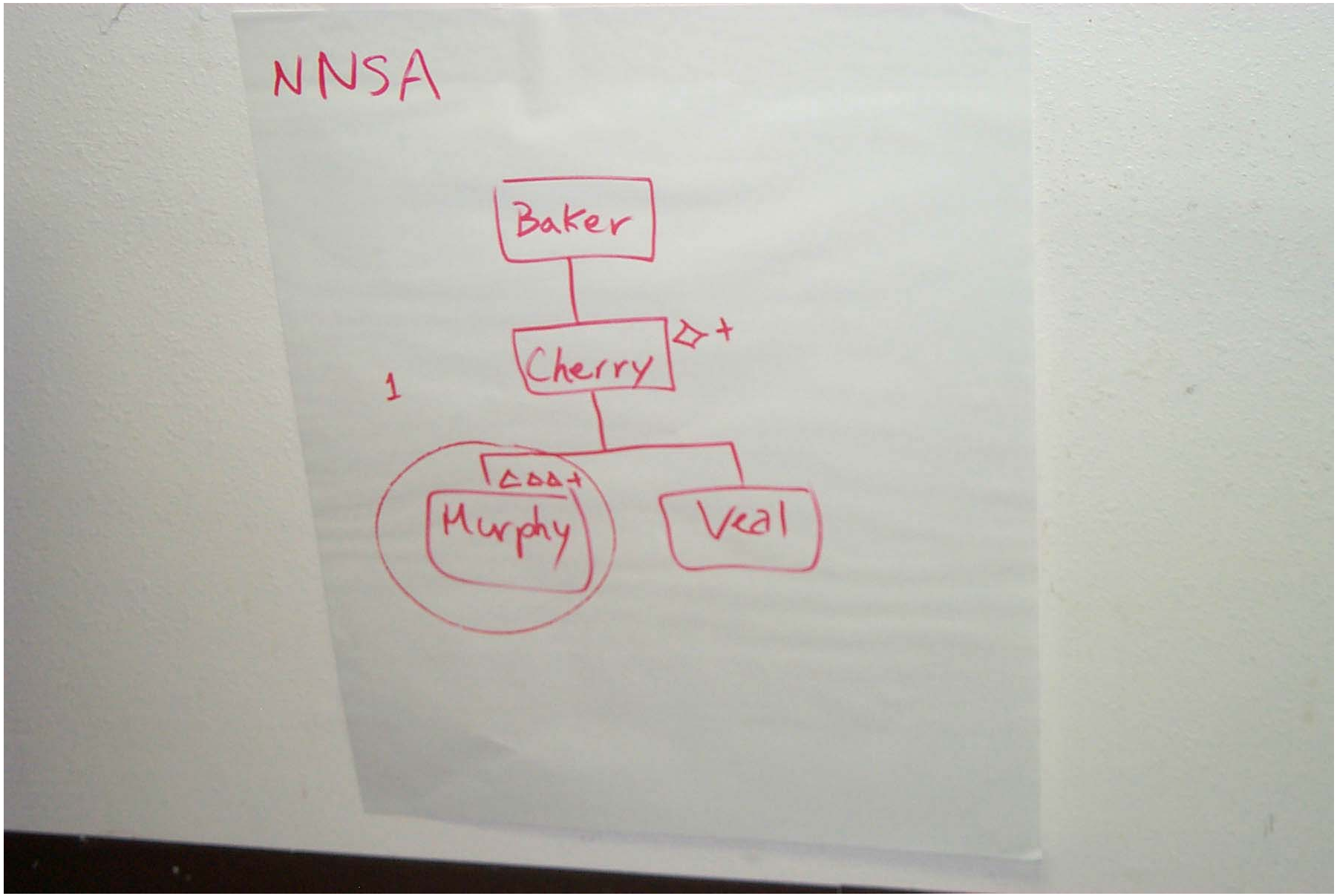
- identify S.W. + format used by IAEA
- identify EXISTING IAEA equipm
  sensors, cameras, computers, etc.
- define comparison criteria
  metrics
- determine unknowns (video parameters)
- ~~develop~~ plan S.W. components
- develop + document SW.
- write a test plan
- test S.W.
- write SW documentation
- Review test results
- Upgrade SW. based on test results
- Prepare + conduct demo

Project Goal

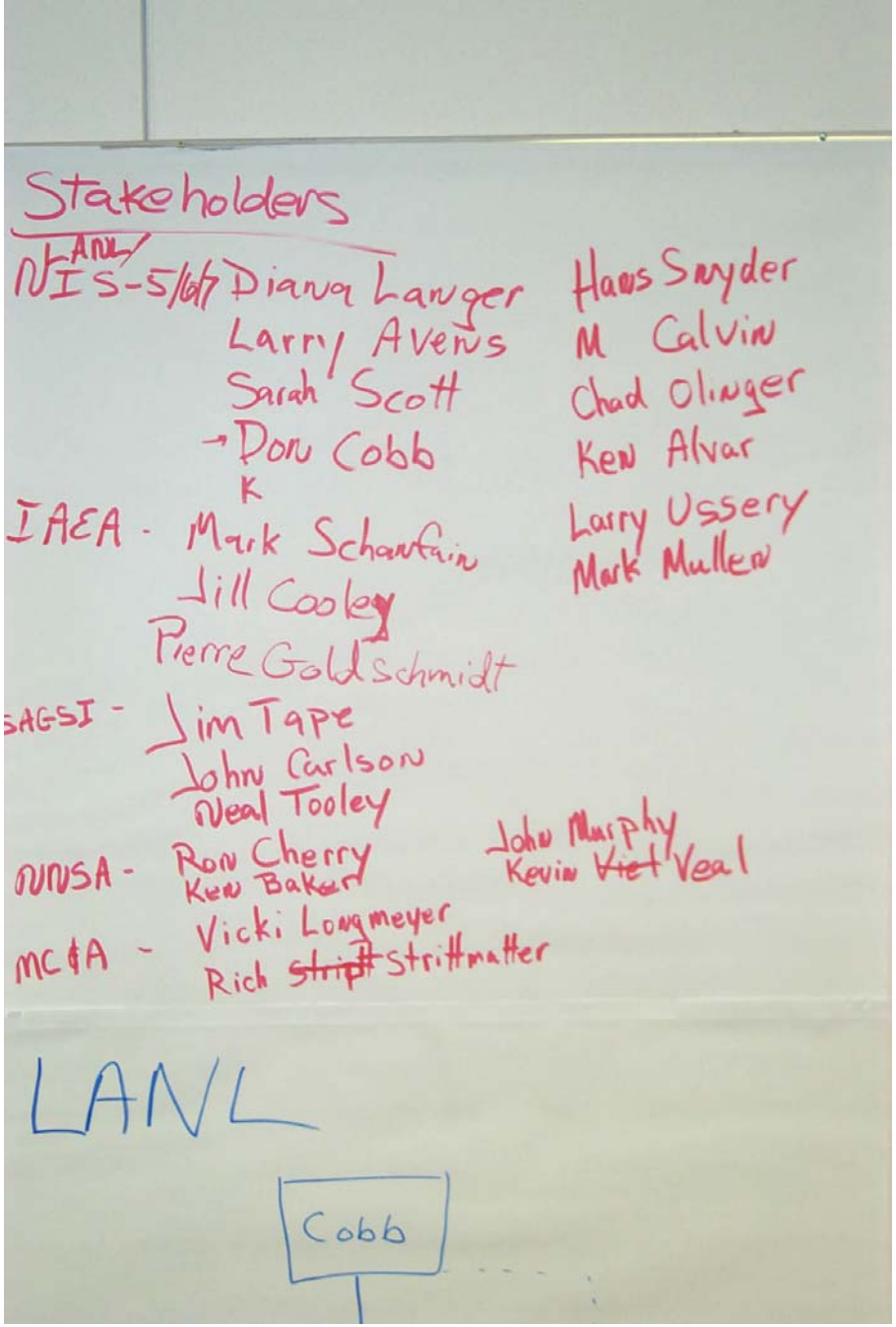
- Design, build and demonstrate to IAEA a Software prototype that evaluates Video Sequences triggered by radiation sensors, movement of nuclear materials, ~~or other events~~ for ~~Video~~.

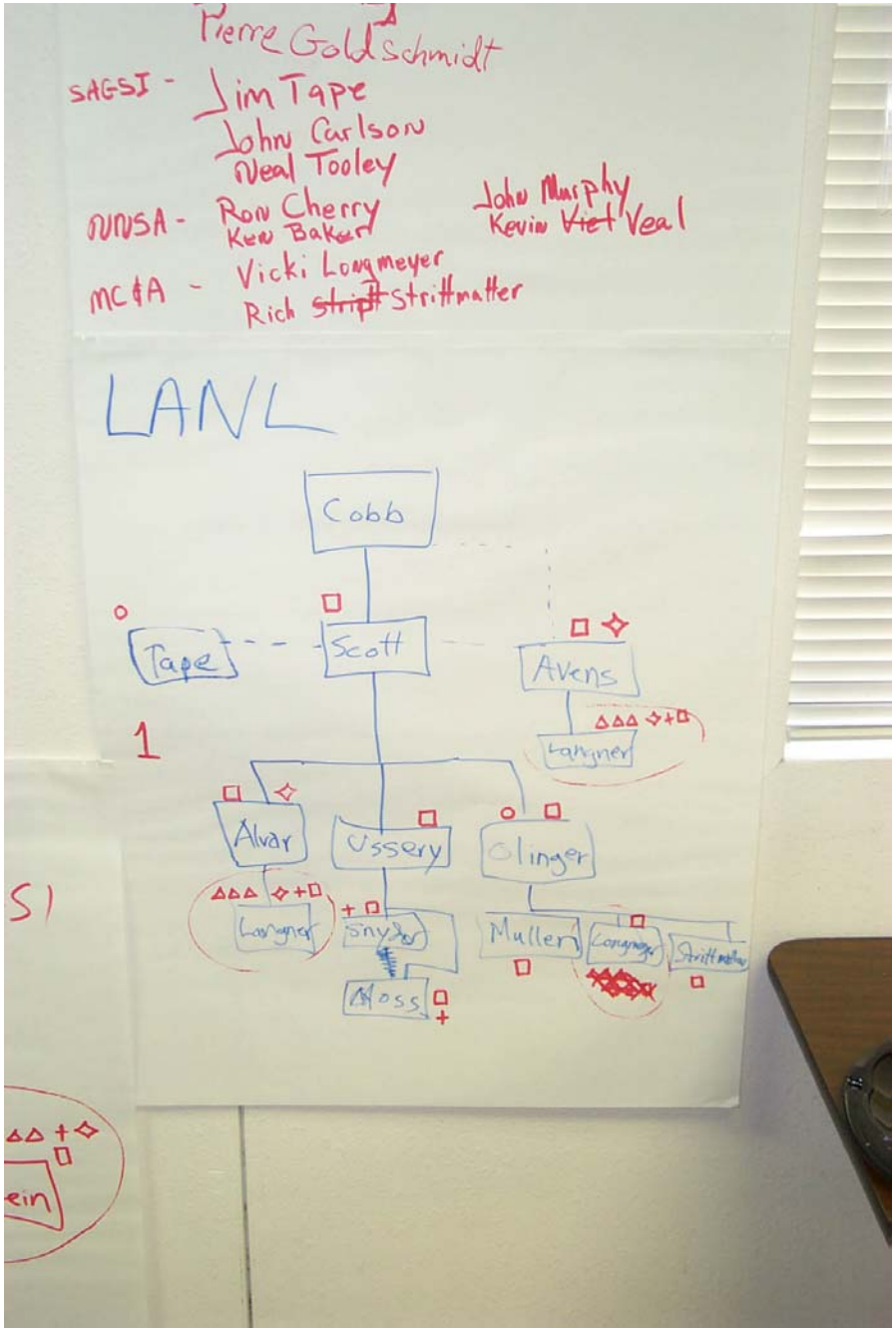
~~Automatically~~ recognizes ~~events~~ in order to identify & tag ~~event~~ of possible interest to IAEA inspectors.

~~to reduce IAEA review times~~


NNSA
Baker
Cherry
1
Murphy
Veal


Tape
1
IAE A/SAGSI
El Bavadel
1
Carlson
Goldschmidt
Tooley
Cooley
Schanfein
Tape
Tooley
Massimo (Max) Apara
+0


Stakeholders
NIS-5/6/7 Diana Langer
Larry Avens
Sarah Scott
→ Don Cobb
K
Hans Snyder
M Calvin
Chad Olinger
Ken Alvar
IAEA - Mark Schanfein
Jill Cooley
Pierre Goldschmidt
Larry Ussery
Mark Mullen
SAGSI - Jim Tape
John Carlson
Neal Tooley
NNSA - Ron Cherry
Ken Baker
John Murphy
Kevin Veal
MC&A - Vicki Longmeyer
Rich Strittmatter
LANL
Cobb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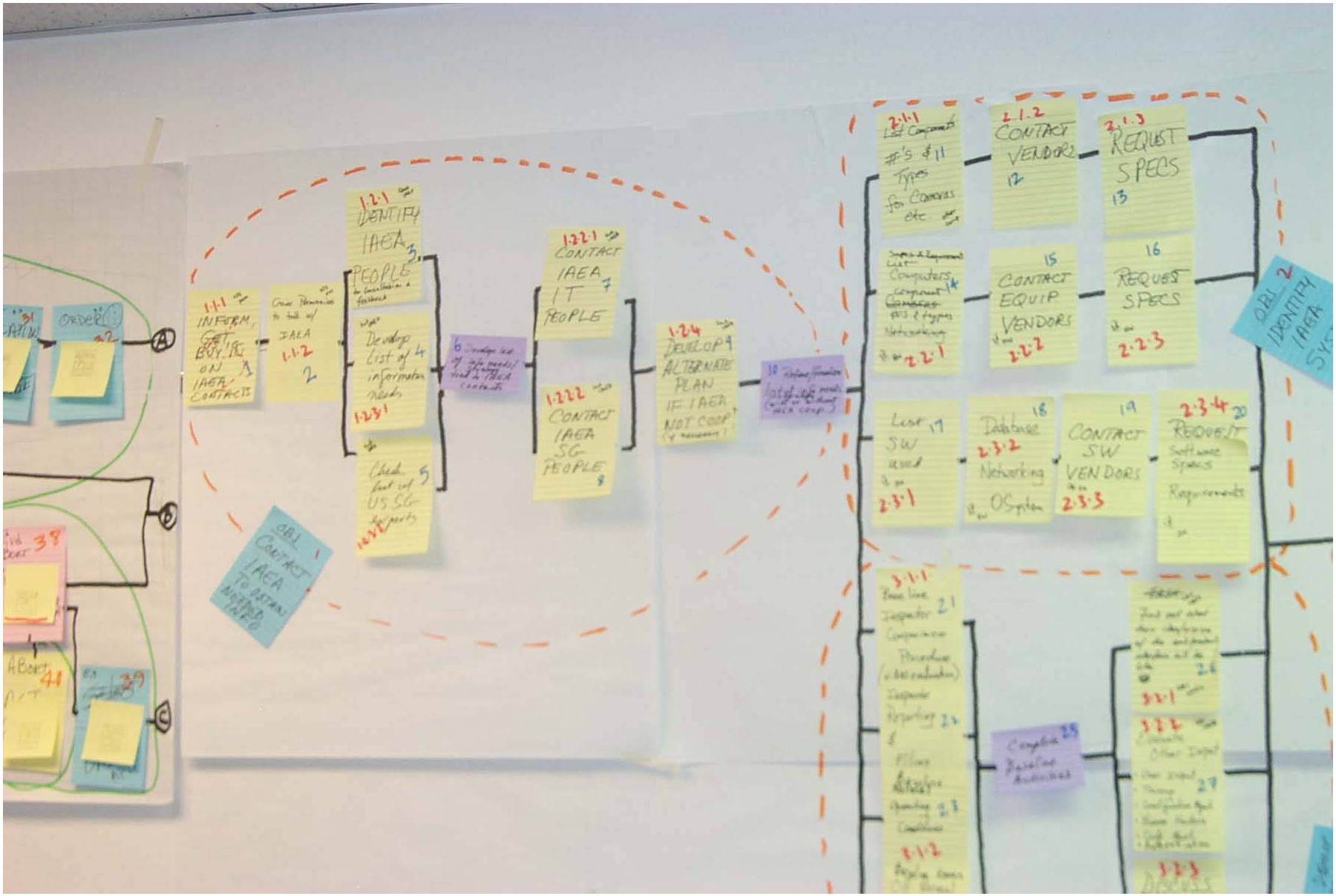
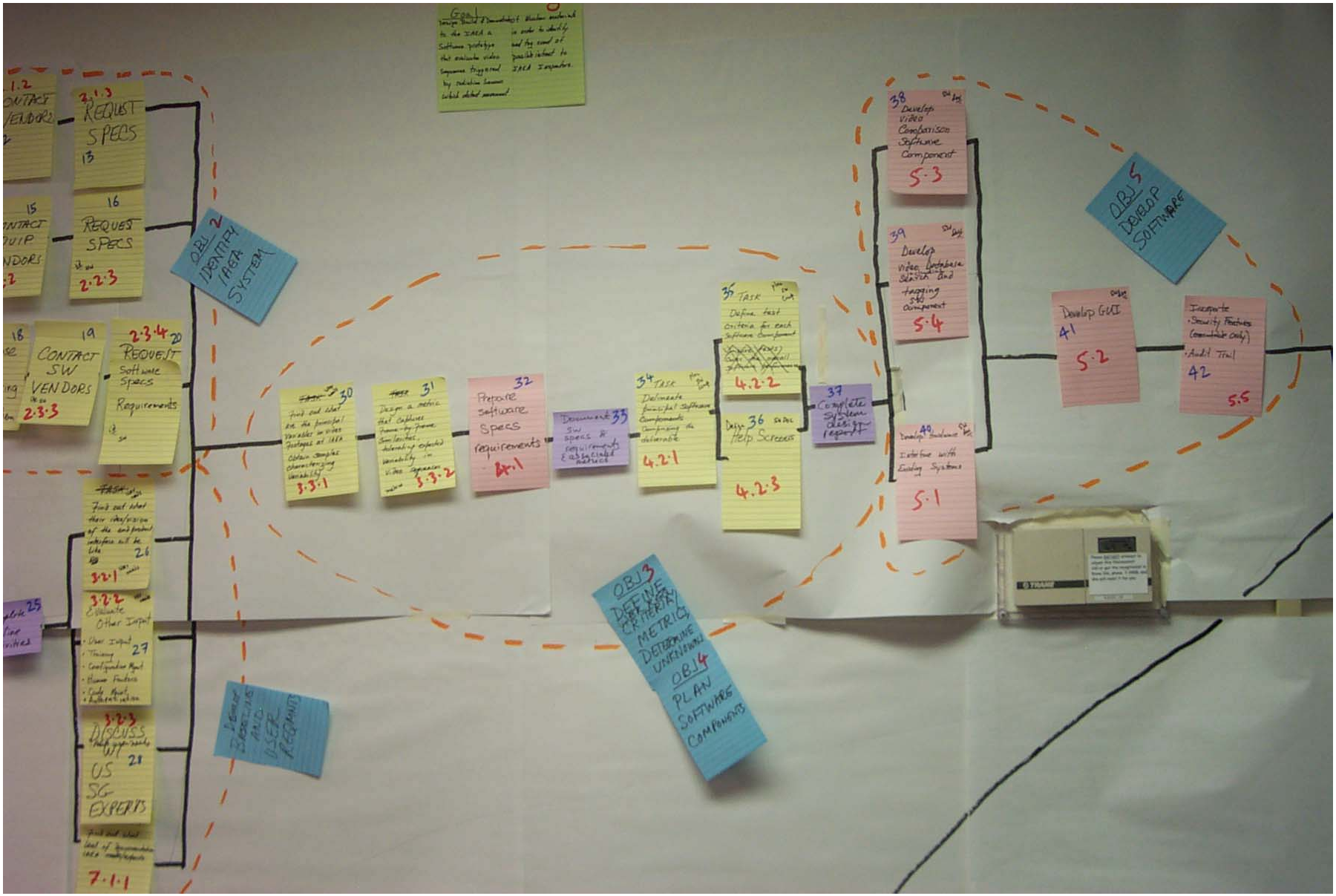
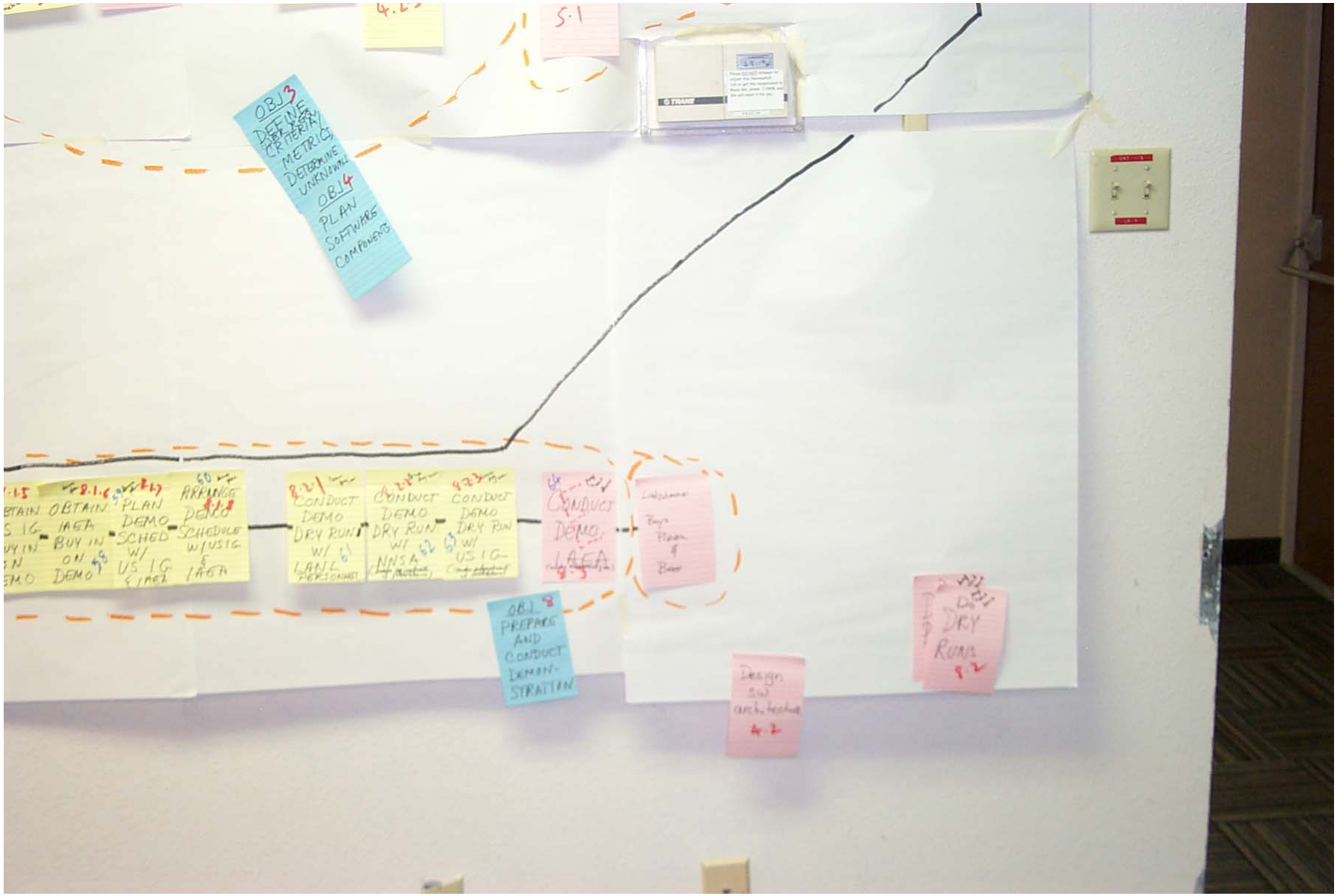
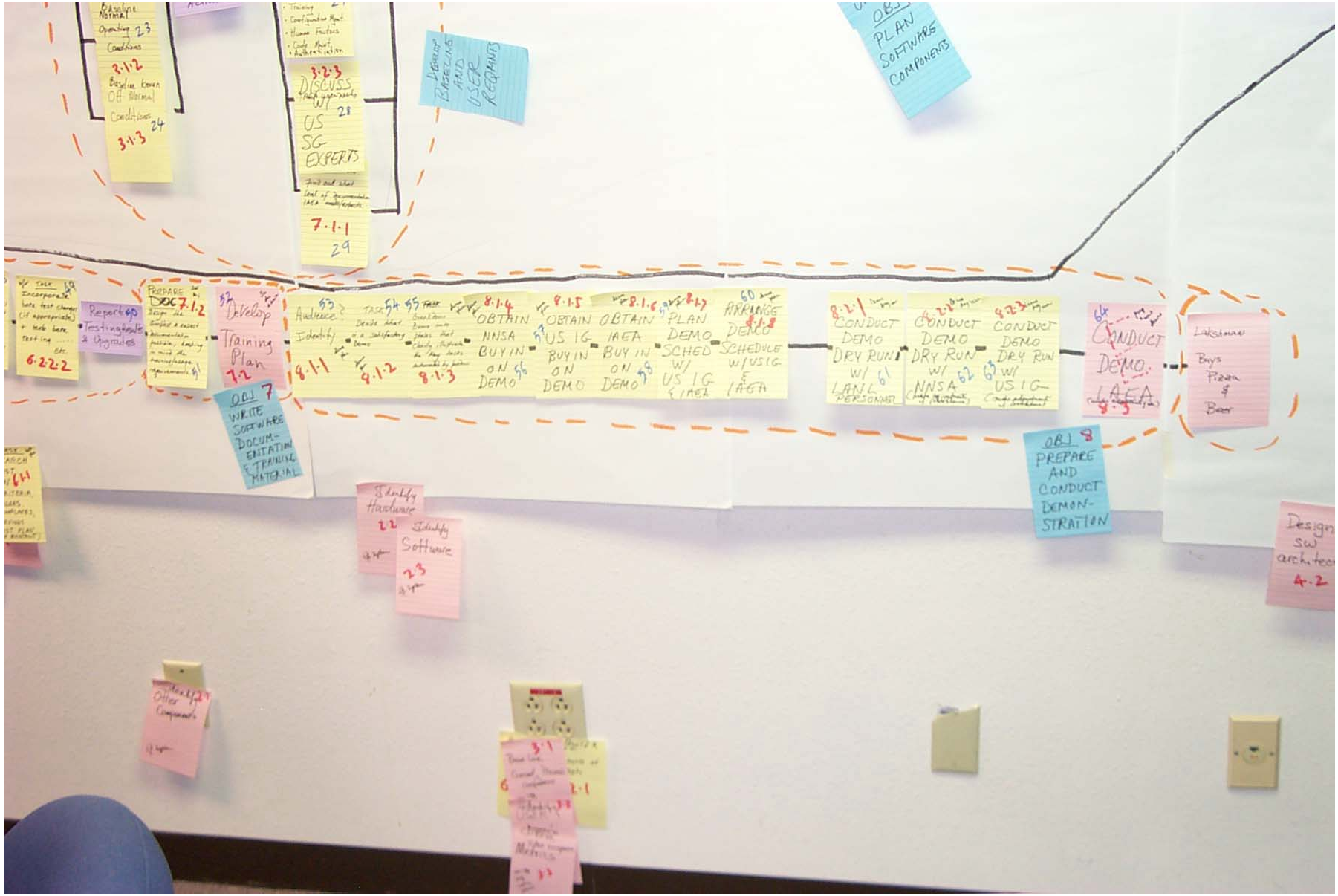
Avens
1
Alvar
Ussery
Olinger
Mullen
Moss


1.1.1 INFORM, GET BUY-IN ON IAEA CONTACTS
1.2.1 IDENTIFY IAEA PEOPLE
Develop list of 4 information needs
1.2.3.1
Check final list of US SG experts
1.2.2.1 CONTACT IAEA IT PEOPLE
1.2.2.2 CONTACT IAEA SG PEOPLE
1.2.4 DEVELOP ALTERNATE PLAN IF IAEA NOT COOP
OBJ 1 CONTACT IAEA TO OBTAIN NEEDED INFO
2.1.1 #'s & Types
2.1.2 CONTACT VENDORS
2.1.3 REQUEST SPECS
Computers
2.2.1
CONTACT EQUIP VENDORS
2.2.2
REQUEST SPECS
2.2.3
OBJ 2 IDENTIFY IAEA SYS
Lease SW used
2.3.1
Database Networking OS's/plan
2.3.2
CONTACT SW VENDORS
2.3.3
REQUEST Software Specs Requirements
2.3.4
3.1.1
3.2.1
3.2.2
3.2.3
ORDER
ABORT


OBJ 2
IDENTIFY IAEA SYSTEM
OBJ 5
DEVELOP SOFTWARE
OBJ 3
DEFINE CRITERIA/METRICS
DETERMINE UNIVERSAL
OBJ 4
PLAN SOFTWARE COMPONENTS
3.1.3
REQUEST SPECS
13
16
REQUEST SPECS
2.2.3
19
CONTACT SW VENDORS
2.3.3
2.3.4
20
REQUEST
Software Specs
Requirements
30
3.3.1
31
3.3.2
32
Prepare Software Specs requirements
4.1
33
4.2.1
35 TASK
Define test criteria for each Software Component
4.2.2
36
Design Help Screens
4.2.3
37
Complete System design report
38
Develop Video Comparison Software Component
5.3
39
Develop video database search and tagging S/W component
5.4
Develop GUI
41
5.2
Incorporate
• Security Features (Countable only)
• Audit Trail
42
5.5
49
Develop Interface with Existing Systems
5.1
3.2.1
3.2.2
Evaluate Other Input
• User Input
• Training
• Configuration Mgmt
• Human Factors
• Code Mgmt
• Authentication
27
3.2.3
DISCUSS
US SC EXPERTS
28
7.1.1


OBJ 3
DEFINE CRITERIA/ METRICS
DETERMINE UNKNOWNS
OBJ 4
PLAN SOFTWARE COMPONENTS
OBTAIN
PLAN DEMO
SCHED W/ USIG & IAEA
CONDUCT DEMO DRY RUN W/ LANL
CONDUCT DEMO DRY RUN W/ NNSA
CONDUCT DEMO DRY RUN W/ USIG
CONDUCT DEMO
OBJ PREPARE AND CONDUCT DEMON-STRATION
Design SW architecture
DRY RUNS


TASK
WRITE Software / Device Test PLAN
6.1.2
Report
Test Plan
TASK
PERFORM
TEST
(with appropriate experts)
+
document
6.2.1 results
TASK
Feed deficiencies revealed by test plan back to software developers
6.2.1.2
TASK
(if necessary)
Redo design + testing, document findings
6.2.1.3
TASK
Select Naive Beta testers; Have them test software + email results to project team
6.2.2.1
TASK
Incorporate beta test changes (if appropriate) + redo beta testing ..... etc.
6.2.2.2
Report
Testing Results & Upgrades
PREPARE
7.1.2
Design the simplest & easiest documentation possible, keeping in mind the training/usage requirements.
Develop
Training Plan
7.2
OBJ 7
WRITE SOFTWARE DOCUM-ENTATION & TRAINING MATERIAL
PERFORM SW TESTING
GET USG Permission to Contact IAEA
OBJ ESTABLISH CONTACT PROCESS
Contact IAEA
1.2.2
1.2.3
REQUEST INFO
Develop Test Plan
for Software
6.2
TASK
RESEARCH
TEST PLAN
6.1.1
CRITERIA, ORDERS, TEMPLATES, PREVIOUS TEST PLAN (if existing)


Develop Training Plan 7.2
OBJ 7 WRITE SOFTWARE DOCUMENTATION & TRAINING MATERIAL
OBJ 8 PREPARE AND CONDUCT DEMONSTRATION
8.1.1
8.1.2
8.1.3
OBTAIN NNSA BUY-IN ON DEMO
8.1.5
OBTAIN US IG BUY-IN ON DEMO
8.1.6
OBTAIN IAEA BUY-IN ON DEMO
PLAN DEMO SCHED W/ US IG & IAEA
ARRANGE DEMO SCHEDULE W/USIG & IAEA
8.2.1
CONDUCT DEMO DRY RUN W/ LANL PERSONNEL
CONDUCT DEMO DRY RUN W/ NNSA
CONDUCT DEMO DRY RUN W/ US IG
CONDUCT DEMO. IAEA
Identify Hardware
Identify Software
PLAN SOFTWARE COMPONENTS
Design SW architec
4.2